



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/673,856	09/29/2003	Ian Millard	12406-166003 / P2003,0240	3711
26181 7590 01/24/2008 FISH & RICHARDSON P.C. PO BOX 1022 MINNEAPOLIS, MN 55440-1022			EXAMINER HEINRICH, SAMUEL M	
			ART UNIT 1793	PAPER NUMBER
			MAIL DATE 01/24/2008	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/673,856

Applicant(s)

MILLARD ET AL.

Examiner

Samuel M. Heinrich

Art Unit

1725

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 7-9, 21-28 and 30-42 is/are pending in the application.
- 4a) Of the above claim(s) 21-28 and 35 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 7-9, 30-34 and 36-42 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: ____.

DETAILED ACTION

Election/Restrictions

Claims 21-28 and 35 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made without traverse in the reply filed on February 02, 2007.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 7-9, 30-34, and 36-42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's Admitted Prior Art (AAPA) in view of JP401062294A in

view of JP402290689A in view of JP406335790A in view of USPN 6,833,222 to
Buzerak et al.

AAPA describes well known ablation of organic material with a laser and shows an assembly comprising nozzle 113 and top window 122 as shown in Prior Art Figure 1.

JP401062294A describe (Abstract) a laser machining method and show (Figures 1-3) well known use of an aperture in a lens located at the top of a nozzle.

JP702290689A describes (Abstract) a laser and a mask having plural openings wherein service life can be extended "by changing the position of the opening part 19".

JP406335790A describes a nozzle having gas input 14 and gas suction port 15.

Buzerak et al describe a nozzle 41 with gas in at vent 46 and vacuum at port 42.

The instant claimed generating, directing, adjusting, providing, and flowing steps would have been obvious at the time applicant's invention was made to a person having ordinary skill in the art because the particular suction and gas flow keeps the apparatus cleaner for a longer time. The use of multiple moveable openings in a nozzle window would have been obvious at the time applicant's invention was made to a person having ordinary skill in the art because it would allow extending the time available for ablation and because the lens contamination is reduced and the service life is extended.

With respect to (WRT) claim 9, the diameter of the aperture shown in JP401062294A is smaller than the beam.

WRT claim 30, JP401062294A shows gas flow up and out through lens aperture.

WRT claim 36, JP702290689A describes changing an aperture position when the beam path becomes "white cloudy" which not descriptively different from the instant claimed "dirty or damaged".

Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's Admitted Prior Art (AAPA) in view of JP401062294A in view of JP402290689A in view of JP406335790A in view of USPN 6,833,222 to Buzerak et al as applied to claim 7 above, and further in view of JP363188488A and JP404167993A.

Both JP363188488A and JP404167993A describe a laser beam larger than a mask opening and the use thereof would have been obvious at the time applicant's invention was made to a person having ordinary skill in the art because the opening size allows suitable modification of the applied beam size.

Claim 31 is rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's Admitted Prior Art (AAPA) in view of JP401062294A in view of JP402290689A in view of JP406335790A in view of USPN 6,833,222 to Buzerak et al as applied to claim 30 above, and further in view of USPN 6,288,363 to Kaga et al.

Kaga et al describe (column 3, lines 17-20) producing a circulatory gas flow in a nozzle via a twisting groove structure and the use thereof would have been obvious at the time applicant's invention was made to a person having ordinary skill in the art because it allows for control of pressure and flow variation.

Claim 32 is rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's Admitted Prior Art (AAPA) in view of JP401062294A in view of

JP402290689A in view of JP406335790A in view of USPN 6,833,222 to Buzerak et al as applied to claim 7 above, and further in view of USPN 6,433,355 to Riess et al.

Riess et al describe (column 11, lines 1-4) well known laser ablation as being compatible with OLED technology and the use thereof would have been obvious at the time applicant's invention was made to a person having ordinary skill in the art.

Claim 33 is rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's Admitted Prior Art (AAPA) in view of JP401062294A in view of JP402290689A in view of JP406335790A in view of USPN 6,833,222 to Buzerak et al as applied to claim 7 above, and further in view of USPN 5,318,869 to Hashimoto et al.

Hashimoto et al describe laser repair using an ultraviolet laser and use thereof would have been obvious at the time applicant's invention was made to a person having ordinary skill in the art because it removes organic material.

Claim 34 is rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's Admitted Prior Art (AAPA) in view of JP401062294A in view of JP402290689A in view of JP406335790A in view of USPN 6,833,222 to Buzerak et al as applied to claim 7 above, and further in view of USPN 4,467,171 to Ramos.

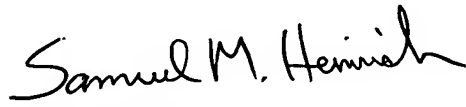
Ramos show and describe (Front Page) well known plural nozzle channels and the use thereof would have been obvious at the time applicant's invention was made to a person having ordinary skill because the structure allows for control of pressure and flow variation.

Conclusion

Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. JP411012723A describes (Abstract and Figures 1-4) a window with plural openings. Knutsson, Wojnarowski et al, and JP362187591A describe laser machining comprising nozzles with vacuum features. JP408318390A describes ablation debris removing nozzles.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Samuel M. Heinrich whose telephone number is 571-272-1175. The examiner's supervisor, J. Johnson can be reached on 571-272-1292. The fax phone number is assigned is 571-273-8300. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 or 571-272-1000.


Samuel M Heinrich
Primary Examiner
Art Unit 1725

SMH